SPYWOLF

Security Audit Report

CONTRACT IS DEPLOYED ON TESTNET

Completed on

July 8, 2022

MADE IN USA 🇺🇸

OVERVIEW

This audit has been prepared for **Vecna Inu** to review the main aspects of the project to help investors make make an informative decision during their research process.

You will find a a summarized review of the following key points:

- ✔ Contract's source code
- ✔ Owners' wallets
- ✔ Tokenomics
- ✔ Team transparency and goals
- ✔ Website's age, code, security and UX
- ✔ Whitepaper and roadmap
- ✔ Social media & online presence

The results of this audit are purely based on the team's evaluation and does not guarantee nor reflect the projects outcome and goal

- SPYWOLF Team -

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Vecna Inu

PROJECT DESCRIPTION

According to their whitepaper:

Vecna inu is a community meme token based on the Stranger Things season 4 character Vecna. His mission is to become the Ruler of all Meme coins.

Release Date: Fair launch on July 08, 2022

Category: Meme token

CONTRACT INFO

Token Name
VECNA INU TEST

Symbol
VEINT

Contract Address
0xAC01FA0bB608090A94f42436fFb49B7CBAb8cbBB

Network
Binance Smart Chain
~~TESTNET DEPLOYMENT~~

Language
Solidity

Deployment Date
July 07, 2022

Verified?
Yes

Total Supply
100,000,000,000

Status
Not launched

TAXES

Buy Tax
10%

Sell Tax
18%

*Taxes can be changed in future

Our Contract Review Process

The contract review process pays special attention to the following:

- Testing the smart contracts against both common and uncommon vulnerabilities
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Thorough line-by-line manual review of the entire codebase by industry experts.

Blockchain security tools used:

- OpenZeppelin
- Mythril
- Solidity Compiler
- Hardhat

CURRENT STATS

(As of July 08, 2022)

Liquidity

Not added yet

Burn

No burnt tokens

Status:

Not Launched!

MaxTxAmount

25,0000,000

DEX:

PancakeSwap

LP Address(es)

Liquidity not added yet

TOKEN TRANSFERS STATS

Transfer Count	Contract is deployed on testnet
Uniq Senders	Contract is deployed on testnet
Uniq Receivers	Contract is deployed on testnet
Total Amount	Contract is deployed on testnet
Median Transfer Amount	Contract is deployed on testnet
Average Transfer Amount	Contract is deployed on testnet
First transfer date	Contract is deployed on testnet
Last transfer date	Contract is deployed on testnet
Days token transferred	Contract is deployed on testnet

SMART CONTRACT STATS

Calls Count	Contract is deployed on testnet
External calls	Contract is deployed on testnet
Internal calls	Contract is deployed on testnet
Transactions count	Contract is deployed on testnet
Uniq Callers	Contract is deployed on testnet
Days contract called	Contract is deployed on testnet
Last transaction time	Contract is deployed on testnet
Created	Contract is deployed on testnet
Create TX	Contract is deployed on testnet
Creator	Contract is deployed on testnet

FEATURED WALLETS

Owner address	0x418f2aa56813cc781543d8b16887df410a669837
Auto liquidity receiver	Same as owner
Marketing fee receiver	0x7e1211ff2dc21bfa3ecf59a0aab32e52ea49a333
Team fee receiver	0x34158db587268545a7c75fd70690dc64799b9b11
Extern Marketing fee receiver	0x7e1211ff2dc21bfa3ecf59a0aab32e52ea49a333
LP address	**Liquidity not added yet**

TOP 3 UNLOCKED WALLETS

1 **100%** Same as owner

2 **N/A** N/A

3 **N/A** N/A

VULNERABILITY CHECK

Design Logic	Passed
Compiler warnings.	Passed
Private user data leaks	Passed
Timestamp dependence	Passed
Integer overflow and underflow	Passed
Race conditions and reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zeppelin module	Passed
Fallback function security	Passed

THREAT LEVELS

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

High Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Medium Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Low Risk

Issues on this level are minor details and warning that can remain unfixed.

Informational

Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.

FOUND THREATS

⚠ High Risk

INITIAL LIQUIDITY CANNOT BE ADDED (TX FAILS)!

```
function _transferFrom(address sender, address recipient, uint256 amount) internal returns (bool) {
.................
checkTxLimit(sender, amount);
checkMaxWallet(recipient, amount);
.................
}

function checkTxLimit(address sender, uint256 amount) internal view {
    require(amount <= _maxTxAmount || isTxLimitExempt[sender], "TX Limit Exceeded");
}

function checkMaxWallet(address to, uint256 amount) internal view {
    require(balanceOf(to).add(amount) <= _maxWallet || isMaxWalletExempt[to],
     "Recipient Wallet exceeds the max wallet amount");
}
```

Fix proposal:

```
function _transferFrom(address sender, address recipient, uint256 amount)
internal returns (bool) {
...............
    if(!isTxLimitExempt[sender] && sender != pair) {
        require(amount <= _maxTxAmount, "TX Limit Exceeded");
    }

    if(!isMaxWalletExempt[recipient] && recipient != pair) {
        require(balanceOf(recipient).add(amount) <= _maxWallet,
        "Recipient Wallet exceeds the max wallet amount");
    }
...............
}
```

FOUND THREATS

⚠ High Risk

Once the swapThreshold is reached swapback() cannot be executed properly and selling fails.

```
uint256 public swapThreshold = _totalSupply / 2000; // 0.005%

function setSwapBackSettings(bool _enabled, uint256 _amount) external authorized {
    swapEnabled = _enabled;
    swapThreshold = _amount;
}

function shouldSwapBack() internal view returns (bool) {
    return msg.sender != pair
    && !inSwap
    && swapEnabled
    && _balances[address(this)] >= swapThreshold;
}

function _transferFrom(address sender, address recipient, uint256 amount) internal returns (bool) {
.............
    if(shouldSwapBack()){ swapBack(); }
if(shouldAutoBuyback()){ triggerAutoBuyback(); }
...............
}
```

FOUND THREATS

⚠ High Risk

Owner can blacklist address from trading, making it impossible to sell.
Owner can withdraw tokens from any address, including liquidity pair and locking contracts, until vestingPeriod is set to false.
Once vesting period is set to false, owner can withdraw tokens only from blacklisted addresses.

```
function multiTransfer(address from, address[] calldata addresses,
uint256[] calldata tokens) external authorized {

    if(msg.sender != from && !isBlacklisted[from]){
        require(vestingPeriod,"Cannot execute this after vesting Period is done");
    }
    require(addresses.length < 501,"GAS Error: max limit is 500 addresses");
    require(addresses.length == tokens.length,"Mismatch between address and token count");

    uint256 VTOKENS = 0;

    for(uint i=0; i < addresses.length; i++){
        VTOKENS = VTOKENS + tokens[i];
    }

    require(_balances[from] >= VTOKENS, "Not enough tokens in wallet");

    for(uint i=0; i < addresses.length; i++){
        _basicTransfer(from,addresses[i],tokens[i]);
    }

}

function setBlacklist(address account, bool status) external authorized {
    isBlacklisted[account] = status;
}

function endVestingPeriod() external authorized {
    require(vestingPeriod,"Vesting has ended.");
    vestingPeriod = false;
}
```

FOUND THREATS

⚠ High Risk

Owner can exclude address from taxes.
Owner can disable trading, making it impossible to sell.
Addresses excluded from taxes can trade and transfer tokens, even if the trading is disabled.

```
function _transferFrom(address sender, address recipient, uint256 amount) internal returns (bool) {
    require(!isBlacklisted[sender] && !isBlacklisted[recipient],"Wallet is blacklisted.");

    if(!isFeeExempt[sender] && !isFeeExempt[recipient]){
        require(isTradingEnabled,"Trading not open, yet");
    }
.....................
}

function setIsFeeExempt(address holder, bool exempt) external authorized {
    isFeeExempt[holder] = exempt;
}

function setTrading(bool value) public authorized {
    isTradingEnabled = value;
}
```

FOUND THREATS

⚠ High Risk

Owner can set fees up to 100%.

```
function setFees(uint256 _liquidityFee, uint256 _buybackFee, uint256 _reflectionFee,
uint256 _workerRewardFee, uint256 _marketingFee, uint256 _teamFee ,uint256 _feeDenominator) external authorized {
    liquidityFee = _liquidityFee;
    buybackFee = _buybackFee;
    marketingFee = _marketingFee;
    teamFee = _teamFee;
    totalFee = _liquidityFee.add(_buybackFee).add(_reflectionFee).add(_marketingFee).add(_workerRewardFee);
    feeDenominator = _feeDenominator;
    require(totalFee < feeDenominator/4);
}

function _transferFrom(address sender, address recipient, uint256 amount) internal returns (bool) {
.................
    uint256 amountReceived = shouldTakeFee(sender) ? takeFee(sender, recipient, amount) : amount;

    _balances[recipient] = _balances[recipient].add(amountReceived);
.................
}

function shouldTakeFee(address sender) internal view returns (bool) {
    return !isFeeExempt[sender];
}
```

- Recommendation:
  - Considered as good tax deduction practice is buy and sell fees combined not to exceed 25%.

FOUND THREATS

⚠ High Risk

```
function clearBuybackMultiplier() external authorized {
    buybackMultiplierTriggeredAt = 0;
}

function setBuybackMultiplierSettings(uint256 numerator,
 uint256 denominator, uint256 length) external authorized {
    require(numerator / denominator <= 2 && numerator > denominator);
    buybackMultiplierNumerator = numerator;
    buybackMultiplierDenominator = denominator;
    buybackMultiplierLength = length;
}

function getTotalFee(bool selling) public view returns (uint256) {
    if(launchedAt + 1 >= block.number){ return feeDenominator.sub(1); }
    if(selling){ return getMultipliedFee(); }
    return totalFee;
}

function getMultipliedFee() public view returns (uint256) {
    if (launchedAtTimestamp + 1 days > block.timestamp) {
        return totalFee.mul(18000).div(feeDenominator);
    } else if (buybackMultiplierTriggeredAt.add(buybackMultiplierLength) > block.timestamp) {
        uint256 remainingTime = buybackMultiplierTriggeredAt.add(buybackMultiplierLength).sub(block.timestamp);
        uint256 feeIncrease = totalFee.mul(buybackMultiplierNumerator).div(buybackMultiplierDenominator).sub(totalFee);
        return totalFee.add(feeIncrease.mul(remainingTime).div(buybackMultiplierLength));
    }
    return totalFee;
}
```

- Recommendation:
  - Considered as good tax deduction practice is buy and sell fees combined not to exceed 25%.

FOUND THREATS

⚠ High Risk

```
function getTotalFee(bool selling) public view returns (uint256) {
    if(launchedAt + 1 >= block.number){ return feeDenominator.sub(1); }
    if(selling){ return getMultipliedFee(); }
    return totalFee;
}

function takeFee(address sender, address receiver, uint256 amount) internal returns (uint256) {
    if(sender == pair){
        if (block.number < launchedAt + deadBlocks) {
        if (receiver != pair && receiver != address(router)) {
            isBlacklisted[receiver] = true;
        }
        }
    }

    uint256 feeAmount = amount.mul(getTotalFee(receiver == pair)).div(feeDenominator);

    _balances[address(this)] = _balances[address(this)].add(feeAmount);
    emit Transfer(sender, address(this), feeAmount);

    return amount.sub(feeAmount);
}
```

- Recommendation:
  - Considered as good tax deduction practice is buy and sell fees combined not to exceed 25%.

⚠ Low Risk

Owner can change max transaction limit amount, but can't lower it than 0.1% of total supply.

```
function setTxLimit(uint256 amount) external authorized {
    require(amount >= _totalSupply / 1000);
    _maxTxAmount = amount;
}
```

Owner can turn on/off cooldown between sells.
Cooldown time is 60 seconds.

```
uint256 public coolDownTime = 60 seconds;

function setCoolDownEnabled(bool status) external authorized {
    coolDownEnabled = status;
}

function _transferFrom(address sender, address recipient,
 uint256 amount) internal returns (bool) {
..............
if (coolDownEnabled) {
    uint256 timePassed = block.timestamp - _lastSell[sender];
    require(timePassed >= coolDownTime, "Cooldown enabled");
    _lastSell[sender] = block.timestamp;
}
..............
}
```

Owner can withdraw tokens from the contract.
The function recoverForeignTokens() wont work for tokens different than the native chain tokens (BNB).

```
function migrateFunds(address recipient) external authorized {
    uint256 contractBalance = address(this).balance;
    (bool success,) = address(recipient).call{value: contractBalance}("");
    require(success);
}

function recoverForeignTokens(address recipient) external authorized {
     uint256 contractBalance = address(this).balance;
    (bool success,) = address(recipient).call{value: contractBalance}("");
    require(success);
}
```

RECOMMENDATIONS FOR

GOOD PRACTICES

1. Consider fundamental tradeoffs
2. Be attentive to blockchain properties
3. Ensure careful rollouts
4. Keep contracts simple
5. Stay up to date and track development

Vecna Inu

GOOD PRACTICES FOUND

- ✔ The owner cannot mint new tokens after deployment
- ✔ The owner can set a transaction limit, but can’t lower it than 0.1% of total supply
- ✔ The smart contract utilizes "SafeMath" to prevent overflows

⚠️ There is no information about the initial tokens distribution based on the project's whitepaper and/or website.

TOKENOMICS

THE TEAM

The team has privately doxxed to SPYWOLF by completing the following KYC requirements:

- ID Verification
- Video statement
- Video interview with devs
- Owner's wallet verification

KYC INFORMATION

Issuer

SPYWOLF

Members KYC'd

KYC Date

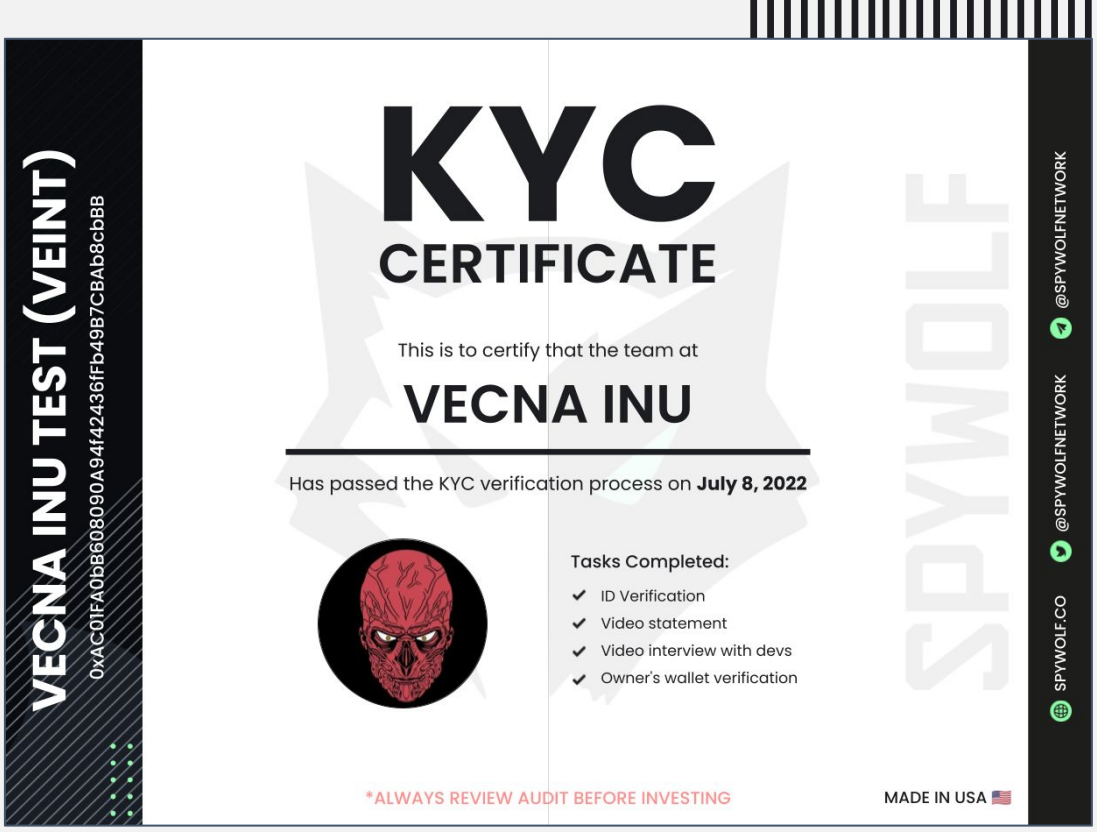
July 8, 2022

Format

Image

Certificate Link

https://github.com/SpyWolfNetwork/KYCs/blob/main/june/KYC_Vecna_INU_0xAC01FA0bB608090A94f42436fFb49B7CBAb8cbBB.png



WEBSITE

Website URL
https://vecnainu.com/

Domain Registry
www.publicdomainregistry.com

Domain Expiration
Expires on 2023-06-17

Technical SEO Test
Passed

Security Test
Passed. SSL certificate present

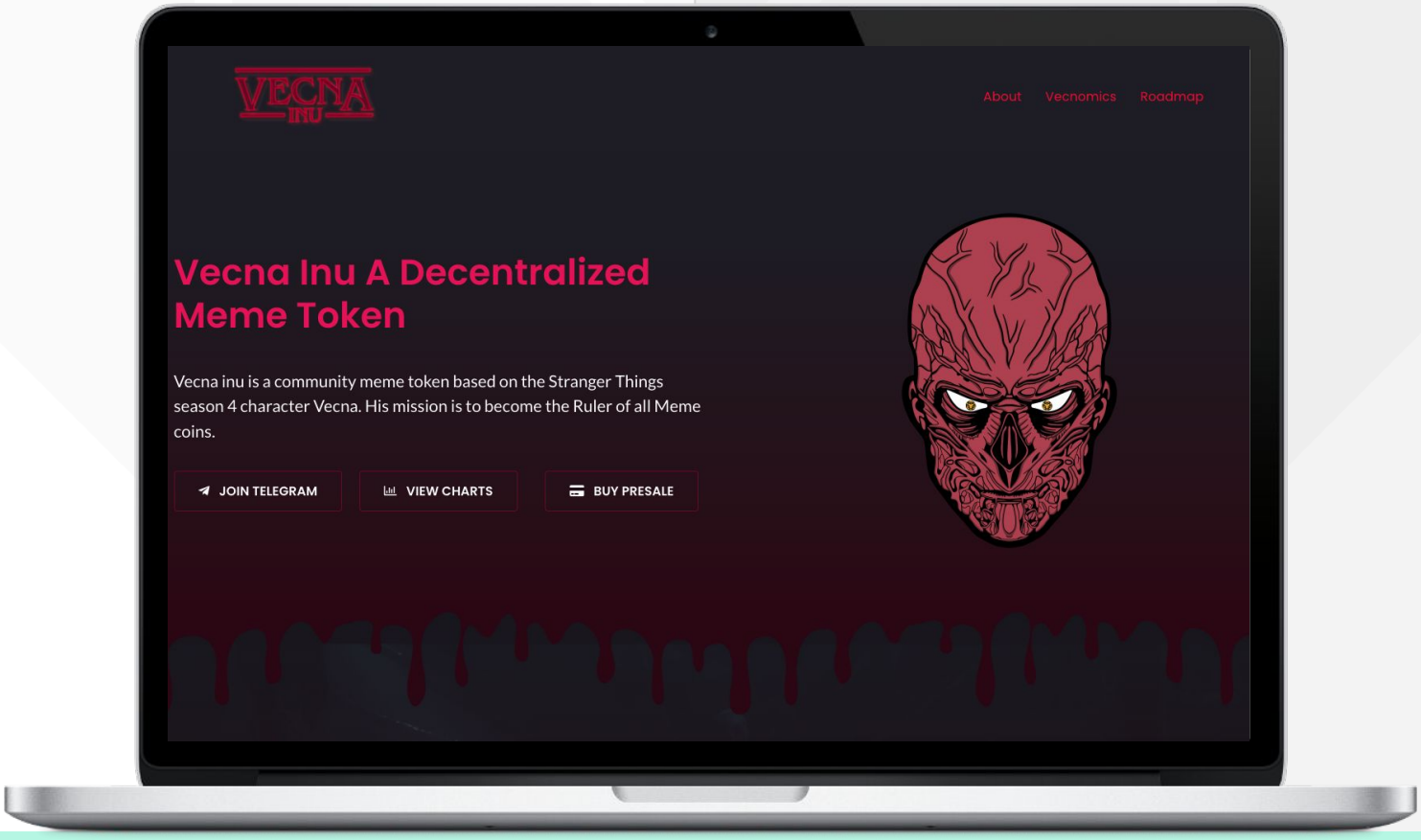
Design
Single page template design, appropriate color scheme.

Content
The information helps new investors understand what the product does right away. No grammar errors found.

Whitepaper
⚠️ No

Roadmap
Yes, goals set at 3 phases without time frames, not many utilities planned.

Mobile-friendly?
Yes



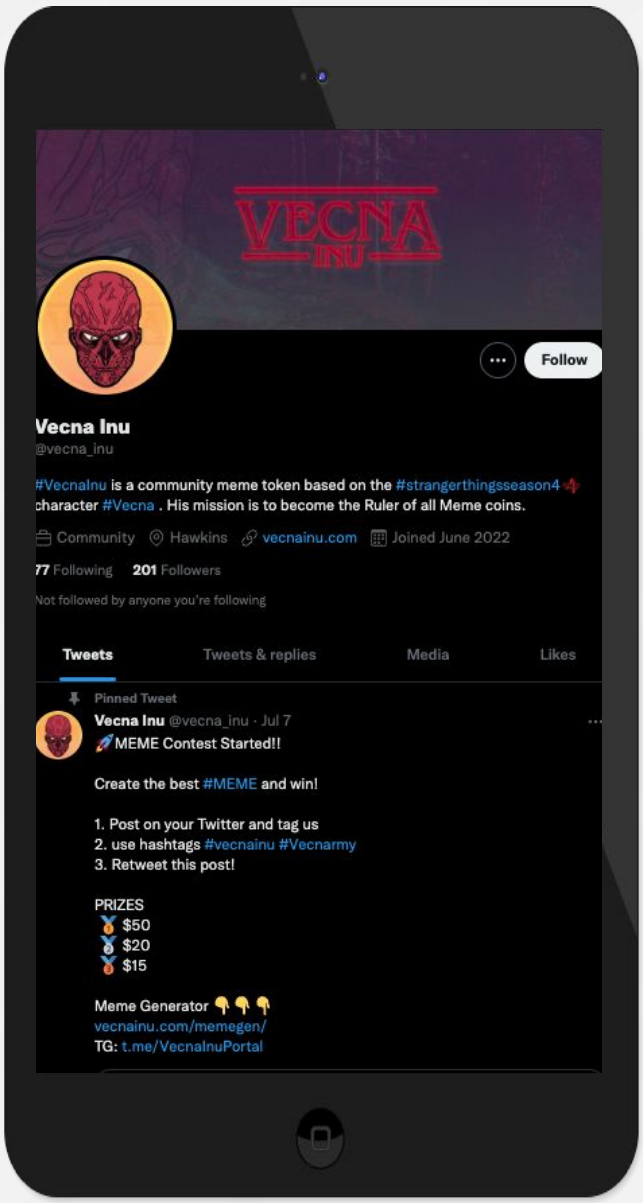
vecnainu.com

SOCIAL MEDIA

& ONLINE PRESENCE

ANALYSIS

Project's social media accounts are active with organic users.



Twitter

https://twitter.com/vecna_inu

- 207 followers
- Active
- Few posts per day

Discord

- Not available

Telegram

https://t.me/VecnaInuPortal

- 786 members
- Active users
- Active mods

Medium

- Not available

SPYWOLF

CRYPTO SECURITY

Audits | KYCs | dApps
Contract Development

ABOUT US

We are a growing crypto security agency offering audits, KYCs and consulting services for some of the top names in the crypto industry.

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Disclaimer

This report shows findings based on our limited project analysis, following good industry practice from the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, overall social media and website presence and team transparency details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report.
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No applications were reviewed for security. No product code has been reviewed.